REMARKS

This is in response to the official action of April 7, 2005. The amendments made are believed to place this case in a condition for allowance, an action to that effect is respectfully requested.

This is action relates to claims 1-9, and 13-16, which are directed toward the elected species I. Claims 10-12 have been withdrawn from consideration. Claims 1, 14 and 16 have been amended.

Also, a supplemental information disclosure statement was submitted on July 11, 2005 along with a copy of U.K. Patent 2,124,466 for consideration. The required fee of $180 was included.

Claims 1-9, 13, 14 and 16 were rejected under 35 U.S.C §103(a) as being unpatentable over the Benfield patent no. 541,956. Benfield does show a horseshoe, but it is respectfully submitted that it has nearly diamond shaped "spikes or teeth" and that they are not oriented in one particular direction as claimed. The Examiner stated that the "spikes or teeth" comprise a leading end, and indicated that Figure 2 had a pointed end. The spikes or teeth positioned on the sides of the horseshoe shown in Figure 3 and also as illustrated in Figure 4 which is a sectional view along the line X–X in Figure 3, have the gnereally flat side surface of the spikes facing to the leading side, and they do not have a rounded leading end surface as claimed. The spikes on the sides of the Benfield horseshoe do not have a rearwardly expanding outer surface, with a laterally extending rear surface that forms a grab surface. It was held in the Office Action that it would have been an obvious substitution of functional equivalents to replace the pointed leading end of the calk of Benfield with a rounded leading end, the positioning of the calks in independent claims 1, 14 and 16 along the sides of the horseshoe is specific in having an orientation and

configuration that expands rearwardly with a rear transverse grab surface. The Benfield patent fails to teach the side calks for oriented as claimed and rather, the spikes of Benfield do not expand rearwardly and form a grab surface side.

It is respectfully submitted that the calks as defined claims 1, 14 and 16 are functionally different than those taught in the Benfield patent.

Benfield's calks on the side walls of the horseshoe present a similar shape and approximately the same working sectional area whether they are viewed or presented from the anterior side or the posterior side of the horseshoe. As such, the "calks" taught in Benfield which are called spikes in the Benfield specification, would provide substantially the same friction, drag and traction forces whether the horseshoe was moving forward or backwards or tending to slide forwards or backwards and would then perform the same resistance against the ground support surface.

The horseshoe and plurality of calks defined in the independent claims of the present application have a rounded leading end, and expand rearwardly, and then have a grab surface or a transverse surface at the rear so that there is a substantially lesser friction, drag and traction forces during the "braking" or planting phase of the gate cycle. Accordingly, as the horse's foot strikes the ground support surface, it will tend to slide much more than it does during the propulsive phase where the rear grab ramp surface or transverse surface will provide a resistance surface to slipping and will permit greater traction and propulsive forces to be developed.

Thus the present invention permits the horseshoe to slide forward slightly during the braking phase of the gait thus reducing the shock loading experienced by the horse and also avoiding an unnatural sudden braking action that can result in soreness and injury. The structure shown and claimed in the

present application is also formed and positioned to generate larger friction, drag and traction forces during the propulsive phase of the horse's hoof as it is driven rearwardly (or as the horse moved forward). Thus, it is respectfully submitted that the horseshoe structure defined in the independent claims in this case are not taught nor the functional equivalent of that taught in Benfield.

Stated in this present specification in several places, and specifically on page 10 line 9 "the calks or projection 32 each have a rounded lower side shape at their forward ends 33 for permitting the horseshoe 20.1 to slide forwards during the braking or hoof planting phase of the gait cycle. The anterior or leading end of the calks are generally bullet shaped." And on page 10 line 22 is states "Further the posterior sides 34 of the calks forms grabs for enhancing traction during the propulsive or thrust phase of the gait cycle".

In this structure as set forth in claim 1, a rear surface is specified as being generally transversed to a fore and aft line, and wherein the calks have a fore and aft length greater than a transverse dimension of the rear surface, but which then provides for the expanding rounded surface to permits sliding forward during the planting or braking phase of the gait and the rear surface that is transverse provides the traction and propulsive force transmitting surface.

In claim 14, the calks are again on "each quarter region" and that is the sides, not the leading end as shown in the Benfield patent Figure 2, and the calks each have a rounded shape on an anterior end, bottom side, and continuously expand to a rear grab surface on a posterior end of the calk. The calks are recited here as also being elongated from the anterior end to the rear grab surface and they are located on the sloped interior wall portion of the horseshoe.

Claim 16 has been amended to include the rounded outer surface that expands rearwardly on the bottom side of the horseshoe and with the calks being longitudinally elongated. The grab surface is recited as extending outwardly toward the center line of the horseshoe and thus provides a substantial grab surface for reaction against the ground during the propulsive phase.

The dependent claims that depend from claim 1 in which are being examined as part of this species are believed allowable with their independent or parent claims. Thus, the addition of the Mackay-Smith patent in relation to claim 15 does not render the overall combination of claims 14 and 15 obvious.

Favorable action is therefore respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to Deposit Account No. 23-1123.

Respectfully submitted,

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